

CLAIMS

1. A fixing apparatus comprising:
a rotating heating element that heat-fixes an
unfixed image on a recording medium;

5 a heating section that heats the rotating heating
element;

a power supply that supplies power to the heating
section; and

10 a self-diagnosis section that issues a directive
for heating when a condition for not heating the rotating
heating element has been met, and confirms that the
rotating heating element is not heated.

2. The fixing apparatus according to claim 1, wherein
15 the power supply has:

an inverter circuit that supplies a high-frequency
alternating current to the heating section; and

20 an oscillation stop circuit that stops oscillation
of the inverter circuit when the rotating heating element
stops or has a rotation speed less than or equal to a
threshold value.

3. The fixing apparatus according to claim 2, further
comprising:

25 a signal generation section that outputs a phase
signal corresponding to a rotation speed of the rotating
heating element; and

a rotation detection section that is provided independently of a processor, and detects from the phase signal that the rotating heating element has stopped rotating or has a rotation speed less than or equal to 5 a threshold value.

4. The fixing apparatus according to claim 1, wherein the power supply has:

an inverter circuit that supplies a high-frequency 10 alternating current to the heating section; and

a power-supply-side processor that controls oscillation of the inverter circuit in accordance with a control signal supplied from a processor, and when the rotating heating element stops or has a rotation speed 15 less than or equal to a threshold value, stops oscillation of the inverter circuit without regard to the control signal.

5. The fixing apparatus according to claim 4, further 20 comprising a signal generation section that outputs a phase signal corresponding to a rotation speed of the rotating heating element;

wherein the power-supply-side processor detects 25 from the phase signal that the rotating heating element has stopped rotating or has a rotation speed less than or equal to a threshold value.

6. The fixing apparatus according to claim 1, wherein
the self-diagnosis section executes self-diagnosis each
time power is turned on and/or restoration is performed
from a sleep state, and/or at regular intervals during
5 standby.

7. The fixing apparatus according to claim 1, wherein
the power supply has:

an inverter circuit that supplies a high-frequency
10 alternating current to the heating section; and
a power suppression circuit that controls
oscillation of the inverter circuit in accordance with
a power control signal supplied from a processor, and
when the rotating heating element stops or has a rotation
15 speed less than or equal to a threshold value, suppresses
oscillation of the inverter circuit without regard to
the power control signal.

8. An image forming apparatus comprising:

20 an image forming section that forms an unfixed image
on a recording medium; and
a fixing apparatus that heat-fixes by means of a
rotating heating element an unfixed image formed on the
recording medium by the image forming section;
25 wherein the fixing apparatus according to claim 1
is used as the fixing apparatus.